

**University of Illinois at Chicago**  
**Illinois Occupational and Environmental Health and Safety Education and Research Center**  
**Annual Program Highlights**  
**Reporting Period: July 1, 2012 – June 30, 2013**  
**Principle Investigator: Lorraine M. Conroy, ScD, CIH**

**Center Administration**

Lisa Brosseau, ScD, CIH was hired as Professor of Environmental and Occupational Health Sciences and Director of Industrial Hygiene in January 2013. Dr. Brosseau was a faculty member in the industrial hygiene program (a NIOSH-funded ERC) at the University of Minnesota from 1991-2013 in which she held, at various times, leadership positions including IH and HSAT Program Director, Pilot Projects Research Training Program Director and ERC Deputy Director. Dr. Brosseau is an active and well-funded researcher, with a focus on respiratory protection device performance and program implementation, industrial hygiene curriculum design, and effectiveness of occupational health and safety interventions in small businesses.

Dr. Brosseau joins a number of other new faculty that have been hired in the past several years. Houshang Darabi, PhD, is the co-director, with Dr. Conroy, of the Occupational Safety program. Dr. Darabi is Associate Professor of Mechanical and Industrial Engineering and an expert on improving efficiency in work flow and manufacturing processes. Three new tenure-track faculty were hired in 2011. Rachael Jones, PhD was hired as a tenure-track Assistant Professor in EOHS. Samuel Dorevitch, MD, MPH was hired from the research track as a tenured Associate Professor and Lee Friedman, PhD was hired from the research track into a tenure-track Assistant Professor. In Fall 2012, the College of Engineering hired a new tenure-track Assistant Professor in the Department of Mechanical and Industrial Engineering. Matthew Bolton, PhD is an expert on human factors and teaches IE/EOHS 441 Ergonomics and Human Factors. At the same time, the College of Nursing hired a new tenure-track Assistant Professor in the Occupational Health Nursing Program. Karen Hopcia, ScD, RN is an expert in occupational health protection and health promotion of health care workers. The School of Public Health hired Dean Paul Brandt-Rauf in 2008. Dr. Brandt-Rauf has over 25 years of research experience investigating the health of high-risk populations exposed to occupational and environmental hazards in the US and around the world. His research focuses on the mechanisms of occupational and environmental carcinogenesis and the molecular epidemiology and prevention of resultant cancers. This group of faculty strengthens our already strong research program in industrial hygiene and epidemiology, but more importantly broadens and deepens the expertise of the ERC in other areas of occupational health-- injury epidemiology, occupational health and safety surveillance; intervention effectiveness in small business; human factors; molecular epidemiology, and total worker health.

**Center Highlights**

**Outreach**

**Program Director: Joseph Zaroni, PhD, MILR**

For the last two years Ms. Marsha Love has collaborated with UIC's Midwest Latino Health Research Training and Policy Center (MLHRTPC) to create a 30- hour health promotion curriculum on nutrition and physical activity to prevent diabetes and cardiovascular disease among Community Health Workers (CHWs) and their clients. Ms. Love has been a key contributor in researching, writing, piloting, evaluating, revising, and designing the curriculum, which is funded by a CDC Reach grant to MLHRTPC's Center for Excellence in Eliminating Disparities (CEED). The curriculum was tested in a five day train-the-trainer session to be led by CHWs. Ms. Love will observe the training and participate in the final evaluation of the project.

Dr. Joseph Zaroni serves on the Community Health Worker Alliance (founded by CEED) and contributes to the Alliance's work on promoting health literacy, curriculum and research for CHWs. Ms. Love and Dr. Zaroni, as advisors to the Chicago Community Health Worker Local Network, created a report outlining occupational health topics for inclusion in a CHW skill development curriculum. The curriculum is now in the

process of being approved by Dean Jeffrey Waddy, Health Sciences Division of the South Suburban Community College and is also under consideration by two community colleges in the City of Chicago Colleges system.

Outreach Program staff continue to collaborate with several workers centers in the Chicago area.

- 1) Warehouse Workers for Justice: Last summer Ms. Love researched and wrote a report on hazards and injuries in warehouse work at the request of Warehouse Workers for Justice.
- 2) Restaurant Opportunities Center: Ms. Love and Dr. Zaroni recently met with the Restaurant Opportunities Center to plan future possible projects.
- 3) Chicago Worker Collaborative: Following up on research conducted last summer by an Occupational Health Internship Program intern placed with the Chicago Workers Collaborative, Ms. Love is exploring the possibility of hosting another summer intern at CWC for 2013 to support ongoing efforts to document occupational injuries and illnesses of temporary workers.
- 4) Latino Union: In his ongoing collaboration with Latino Union, Dr. Zaroni is partnering with Dr. Janise Hurtig, PhD at the UIC School of Education, and Latino Union staff to evaluate the success of health and safety education and other measures to improve working conditions for contingent workers in a workforce development program which funds some of Latino Union's work.

**Agricultural Safety and Health - CE**  
**Program Director: Joseph Zaroni, PhD, MILR**

A prominent example of Agricultural Safety and Health Continuing Education Program (ASH-CE) action is the leadership that Drs. Aherin and Petrea have taken regarding a local response to grain handling fatalities. In 2010 there were 10 grain storage suffocation deaths in Illinois and 53 deaths in the region. Two of the deaths involved 19 and 14 year old young men that resulted in national attention by OSHA and others. The aunt of one of the victims wanted to know who she could turn to for help. Several sources told her to contact Dr. Robert Aherin because of his established expertise in this area. She contacted him within a week of the tragic event. He saw this as an opportunity time through his established connections to bring the various entities that had interest and responsibilities for grain handling safety together to explore how to more effectively address this major industry issue. Dr. Aherin provided the leadership in forming the Grain Handling Safety Coalition.

The Grain Handling Safety Coalition (GHSC, <http://www.grainsafety.org/>), is a consortium of public and private organizations that work together to reduce or prevent grain bin accidents and fatalities through education and outreach. Current members of the coalition include the Grain and Feed Association, OSHA, Farm Bureau, University of Illinois Fire Service Institute and Extension, Purdue University, University of Iowa Great Plains Agricultural Health Center, Farm Service Agency, FFA organization, Carle Center for Rural Health and Farm Safety, Illinois Department of Agriculture Soybean Association, Community Health Partnership of Illinois (operate migrant health clinics in Illinois), two active farmers, two local grain elevator managers, and the University of Wisconsin. Dr. Aherin provided the leadership in writing a proposal for an OSHA Susan Harwood Grant focused on developing a community-based grain safety education program for farm operators, farm employees, grain elevator operators and employees. This program is one example of the important capabilities and impact of the ASH-CE program as a catalyst and model for community-based response to agricultural fatalities.

A long standing problem the coalition addressed, is the lack of a low cost and appropriate lifeline system for workers entering grain bins. Approximately 95% of the grain storage structures in the US do not have adequate anchor points and a method to allow a worker to enter a bin when necessary and protect them from falling through bridged grain or from being entrapped in flowing grain. A sub-group of the committee consisting of a 30-year safety director from a large grain cooperative, safety director of the Grain and Feed Association of Illinois, a product safety engineer with a large grain bin manufacturer, agricultural rescue coordinator at the University of Illinois Fire Service Institute, a certified engineer, and Dr. Aherin. The group developed a method that allows for the installation and/or use of an anchor point located near the side hatch opening of the bin, a knot pass through pulley near the top eave opening of the bin which then allows for a lanyard to be passed through the pulley in the top of the bin and then attached to entrants full body harness. A belaying device is used by observer to control the slack in the lanyard and protects the entrant if they fall through or pulled into flowing grain. The coalition is finalizing a set of training materials on this method and OSHA intends to distribute it nationwide.

The coalition developed 5 training modules on various key grain safety topics. The modules are each designed to be taught in 60 to 90 minutes and include power point presentation, demonstrations, problem exercises, and instructors guide. Training with the materials began earlier this year and several hundred farm workers and grain elevator workers have participated. The intent is to promote the trainings continually in this region and throughout the US. The materials will also be available through the internet. Webinars for instructors are planned for the coming year. The coalition continues to develop several media public service announcements. Dr. Aherin continues working with the GHSC. This is an example of how our program functions to address major issues in agricultural safety and health by linking various organizations together who have expertise, networks with the agricultural industry and resources to help mitigate a safety problem.